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Phospho-E2F1(S337) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3091a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q01094
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB7692
Calculated MW	46920

Additional Information

Gene ID	1869
Other Names	Transcription factor E2F1, E2F-1, PBR3, Retinoblastoma-associated protein 1, RBAP-1, Retinoblastoma-binding protein 3, RBBP-3, pRB-binding protein E2F-1, E2F1, RBBP3
Target/Specificity	This E2F1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S337 of human E2F1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-E2F1(S337) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	E2F1 {ECO:0000303|PubMed:8964493, ECO:0000312|HGNC:HGNC:3113}
Function	Transcription activator that binds DNA cooperatively with DP proteins through the E2 recognition site, 5'-TTTC[CG]CGC-3' found in the promoter region of a number of genes whose products are involved in cell cycle regulation or in DNA replication (PubMed:10675335, PubMed:12717439,

PubMed:17050006, PubMed:17704056, PubMed:18625225, PubMed:28992046). The DRTF1/E2F complex functions in the control of cell-cycle progression from G1 to S phase (PubMed:10675335, PubMed:12717439, PubMed:17704056). E2F1 binds preferentially RB1 in a cell-cycle dependent manner (PubMed:10675335, PubMed:12717439, PubMed:17704056). It can mediate both cell proliferation and TP53/p53-dependent apoptosis (PubMed:8170954). Blocks adipocyte differentiation by binding to specific promoters repressing CEBPA binding to its target gene promoters (PubMed:20176812). Directly activates transcription of PEG10 (PubMed:17050006, PubMed:18625225, PubMed:28992046). Positively regulates transcription of RRP1B (PubMed:20040599).

Cellular Location Nucleus

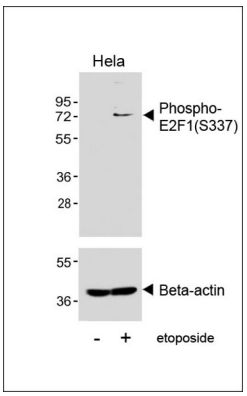
Background

E2F1 is a member of the E2F family of transcription factors. The E2F family plays a crucial role in the control of cell cycle and action of tumor suppressor proteins and is also a target of the transforming proteins of small DNA tumor viruses. The E2F proteins contain several evolutionally conserved domains found in most members of the family. These domains include a DNA binding domain, a dimerization domain which determines interaction with the differentiation regulated transcription factor proteins (DP), a transactivation domain enriched in acidic amino acids, and a tumor suppressor protein association domain which is embedded within the transactivation domain. This protein and another 2 members, E2F2 and E2F3, have an additional cyclin binding domain. This protein binds preferentially to retinoblastoma protein pRB in a cell-cycle dependent manner. It can mediate both cell proliferation and p53-dependent/independent apoptosis.

References

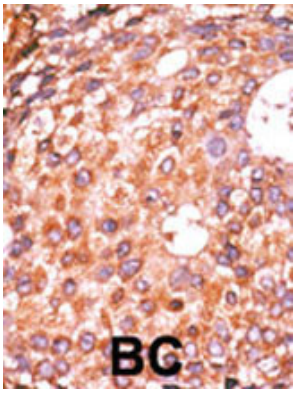
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Wang, C., et al., J. Biol. Chem. 280(13):12339-12343 (2005).
Joshi, B., et al., Oncogene 24(13):2204-2217 (2005).
Saberwal, G., et al., Int. J. Hematol. 80(2):146-154 (2004).
Chaussepied, M., et al., Mol. Cell 16(5):831-837 (2004).

Images



Western blot analysis of lysates from Hela cell line, untreated or treated with etoposide(25μM, 24h), using Phospho-E2F1(S337) Antibody(upper) or Beta-actin (lower).

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma;



HC = hepatocarcinoma.

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